

# Monthly Flash Estimates of Electric Power Data

Data for:  
January 2011

## Section 1. Commentary

The contiguous United States as a whole experienced temperatures that were below normal in January 2011. Accordingly, the total population-weighted heating degree days for the United States were 4.3 percent above the January normal.

Retail sales of electricity increased 1.8 percent from January 2010. Over the same period, the average U.S. retail price of electricity increased 2.9 percent. For the 12-month period ending January 2011, the average U.S. retail price of electricity increased 1.1 percent over the previous 12-month period ending January 2010.

In January 2011, total electric power generation in the United States increased 0.5 percent compared to January 2010 (the change in electric power generation does not necessarily coincide with the change in retail sales of electricity because utility billing cycles tend to lag electricity production in many areas). Over the same period, coal generation decreased 1.4 percent, while natural gas generation decreased 0.6 percent. Petroleum liquids generation had the largest percentage change, decreasing 42.0 percent due in part to the increased cost of petroleum liquids as a fuel used in electricity generation. Conventional hydroelectric generation increased 16.3 percent from the previous year, mainly due to dryer conditions observed in the Northwest in January 2011 that led to an early snowmelt in the region.

Consistent with the year-over-year increase in coal generation, the consumption of coal to produce electricity decreased 0.7 percent. Over the same period, natural gas consumption decreased 1.0 percent, while petroleum liquids consumption decreased 42.1 percent when compared to January 2010.

Total coal stocks decreased 5.8 percent from the previous month. Accordingly, the average number of days of burn for coal plants consuming bituminous or subbituminous coal as their primary fuel exhibited a similar decrease from the previous month.

### References for weather data:

<http://www.ncdc.noaa.gov/oa/climate/research/2011/jan/national.html>

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**Table 2.1 Key Generation Indicators**

	<b>Total Generation</b>	<b>Nuclear Generation</b>	<b>Hydroelectric Generation</b>
<b>Total Change From:</b>			
<b>December 2010</b>	<b>0.3%</b>	<b>-1.3%</b>	<b>11.5%</b>
<b>January 2010</b>	<b>0.5%</b>	<b>0.2%</b>	<b>16.3%</b>
<b>Year to Date</b>	<b>0.5%</b>	<b>0.2%</b>	<b>16.3%</b>
<b>Latest 12 Month Period*</b>	<b>4.2%</b>	<b>1.2%</b>	<b>-4.2%</b>

**Table 2.2 Key Consumption and Stocks Indicators**

	<b>Natural Gas Consumption</b>	<b>Coal Consumption</b>	<b>Coal Stocks</b>
<b>Total Change From:</b>			
<b>December 2010</b>	<b>-4.3%</b>	<b>1.6%</b>	<b>-5.8%</b>
<b>January 2010</b>	<b>-1.0%</b>	<b>-0.7%</b>	<b>-7.4%</b>
<b>Year to Date</b>	<b>-1.0%</b>	<b>-0.7%</b>	<b>--</b>
<b>Latest 12 Month Period*</b>	<b>6.2%</b>	<b>4.7%</b>	<b>--</b>

\* Change in total consumption or generation for the latest 12 month period (February 2010 to January 2011) compared to the prior 12 month period (February 2009 to January 2010).

Net Generation (Total, All Sectors)

**Table 3.1 Total Net Generation (All Sectors)**

Net Generation (thousand megawatthours)	Jan-11	Jan-10	% Change	Dec-10	% Change
Coal	171,040	173,505	-1.4%	167,548	2.1%
Petroleum Liquids	1,840	3,171	-42.0%	2,418	-23.9%
Natural Gas	73,129	73,558	-0.6%	76,822	-4.8%
Nuclear	72,743	72,569	0.2%	73,683	-1.3%
Hydroelectric Conventional	25,775	22,156	16.3%	23,111	11.5%
All Other	17,676	15,442	14.5%	17,661	0.1%
Total (All Energy Sources)	362,203	360,401	0.5%	361,244	0.3%

Fossil Fuel Consumption for Electric Generation (Total, All Sectors)

**Table 3.2 Total Consumption of Fossil Fuels for Electric Generation (All Sectors)**

Consumption of Fossil Fuels	Jan-11	Jan-10	% Change	Dec-10	% Change
Coal (Thousand Short Tons)	90,105	90,716	-0.7%	88,662	1.6%
Petroleum Liquids (Thousand Barrels)	3,208	5,540	-42.1%	4,202	-23.7%
Natural Gas (Million Cubic Feet)	560,265	566,092	-1.0%	585,587	-4.3%

Fossil Fuel Stocks (Electric Power Sector)

**Table 3.3 Total Fossil Fuel Stocks (Electric Power Sector)**

Fossil Fuel Stocks	Jan-11	Jan-10	% Change	Dec-10	% Change
Coal (Thousand Short Tons)	164,932	178,063	-7.4%	175,160	-5.8%
Petroleum Liquids (Thousand Barrels)	35,634	37,556	-5.1%	36,126	-1.4%

**Notes:**

- Coal consumption and generation includes subbituminous coal, bituminous coal, anthracite, lignite, and waste coal.
- Coal stocks include the coal categories listed immediately above, except for waste coal. The bituminous category includes anthracite.
- Petroleum Liquids consumption and generation includes distillate oil, residual oil, jet fuel, kerosene and waste oil.
- Petroleum Liquids stocks includes the oil categories listed immediately above, only waste oil is excluded.
- The "All Other" generation category includes biomass, solar, wind, geothermal, hydroelectric pumped storage, petroleum coke, other gases, and other miscellaneous energy sources.

# Section 4. Net Generation Trends

Data for:  
January 2011

**Table 4.1 Trends in Total Generation by Fuel (All Sectors)**  
Millions of Kilowatthours

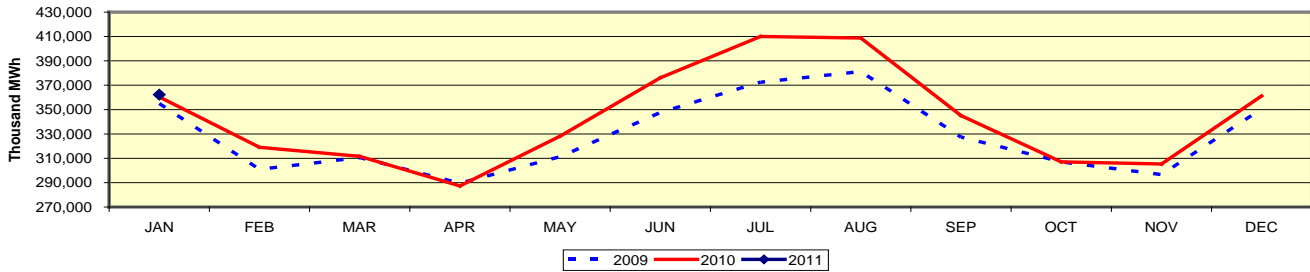
**Year-to-Date Comparison**

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	January 2011	January 2011	171,040	1,840	73,129	72,743	25,775	17,676	362,203
<b>Prior Period</b>	January 2010	January 2010	173,505	3,171	73,558	72,569	22,156	15,442	360,401
<b>Percent Difference</b>			-1.4%	-42.0%	-0.6%	0.2%	16.3%	14.5%	0.5%

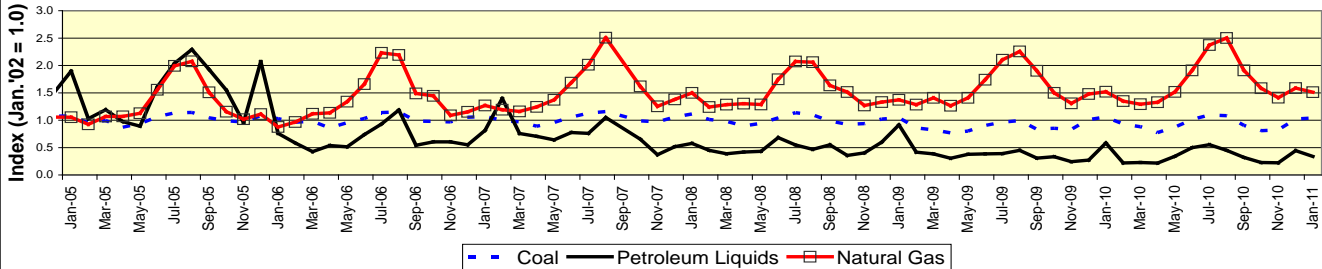
**Comparison to Prior Twelve-Month Period**

	Starting Month	Ending Month	Coal	Petroleum Liquids	Natural Gas	Nuclear	Hydroelectric Conventional	All Other	Total
<b>Current Period</b>	February 2010	January 2011	1,848,286	22,066	981,385	807,142	260,671	202,280	4,121,830
<b>Prior Period</b>	February 2009	January 2010	1,757,484	24,177	927,976	797,321	272,111	176,079	3,955,148
<b>Percent Difference</b>			5.2%	-8.7%	5.8%	1.2%	-4.2%	14.9%	4.2%

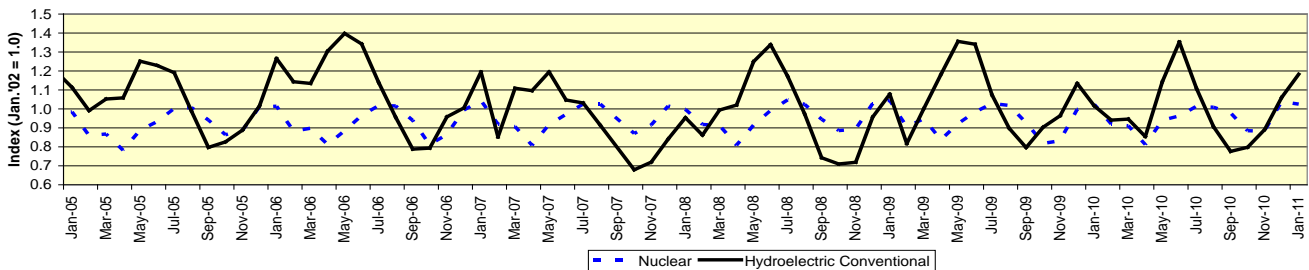
**Figure 4.1 Trends in Total Net Generation (All Sectors): 2009, 2010, and 2011**



**Figure 4.2 Fossil Fuel Generation Trends (Values as Indices, Jan. 2002 = 1.0)**



**Figure 4.3 Nuclear and Hydroelectric Generation Trends (Values as Indices, Jan. 2002 = 1.0)**



## Table 5.1 Trends in Fossil Fuel Consumption For Electric Generation, Total (All Sectors)

### Year-to-Date Comparison

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	January 2011	January 2011	90,105	3,208	560,265
<b>Prior Period</b>	January 2010	January 2010	90,716	5,540	566,092
<b>Percent Difference</b>			-0.7%	-42.1%	-1.0%

### Comparison to Prior 12 Month Period

	Starting Month	Ending Month	Coal (Thousand Tons)	Petroleum Liquids (Thousand Barrels)	Natural Gas (Million Cubic Feet)
<b>Current Period</b>	February 2010	January 2011	978,944	37,709	7,627,642
<b>Prior Period</b>	February 2009	January 2010	934,760	40,760	7,181,961
<b>Percent Difference</b>			4.7%	-7.5%	6.2%

Figure 5.1 Trend in Total Coal Consumption For Electric Generation (All Sectors): 2009, 2010, and 2011

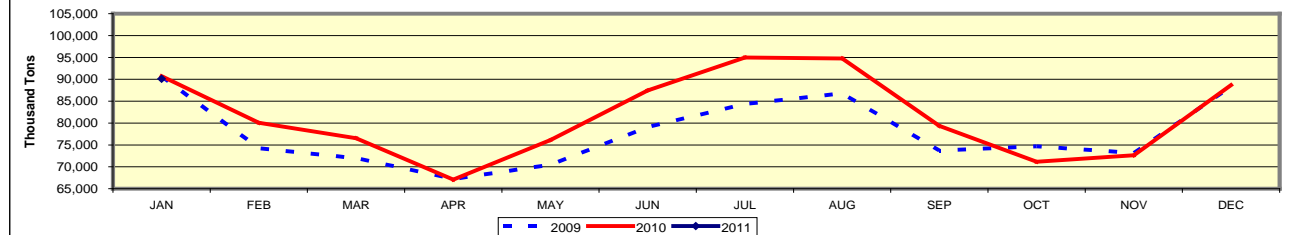


Figure 5.2 Trend in Total Petroleum Liquids Consumption For Electric Generation (All Sectors): 2009, 2010, and 2011

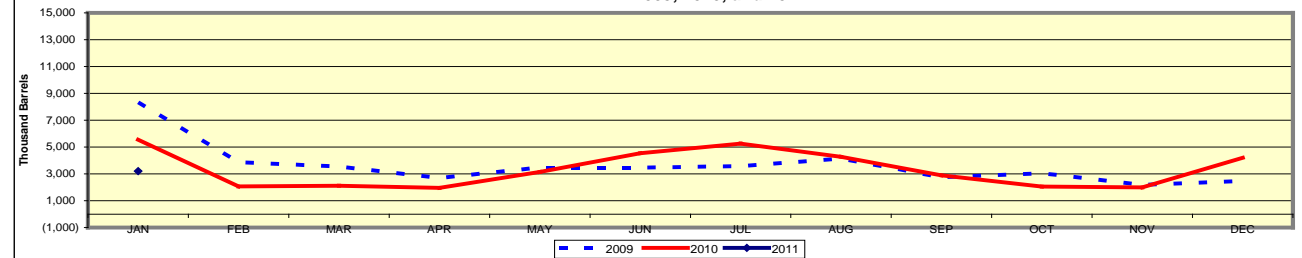
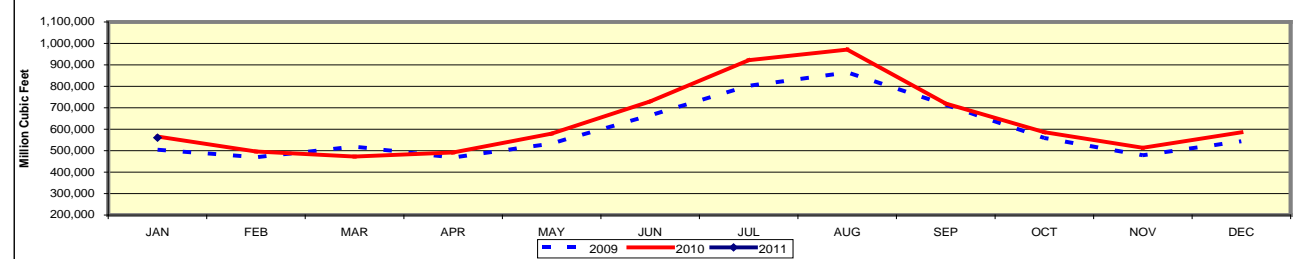


Figure 5.3 Trend in Total Natural Gas Consumption For Electric Generation (All Sectors): 2009, 2010, and 2011

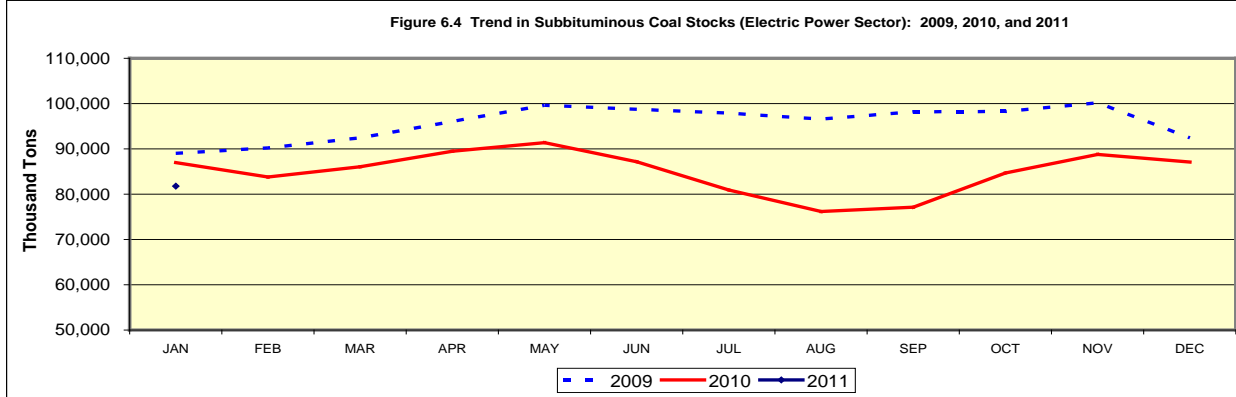
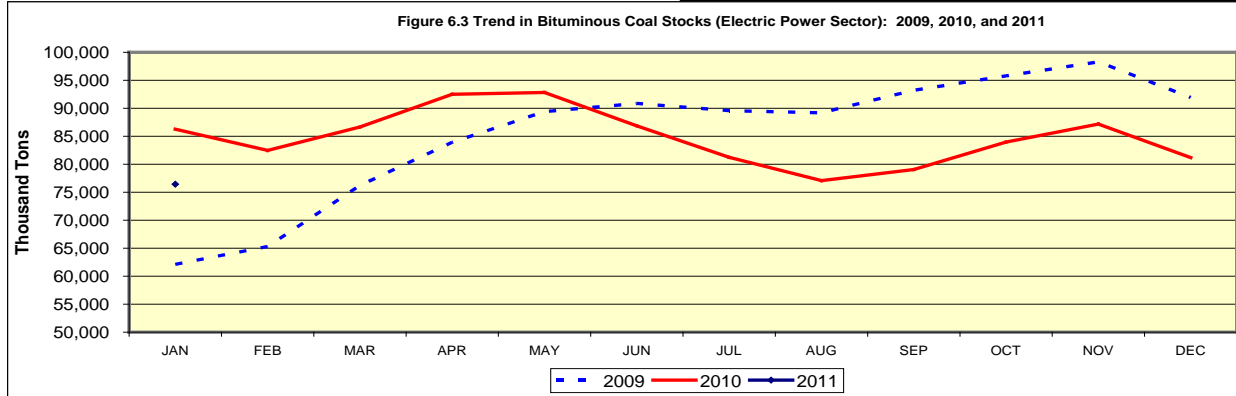
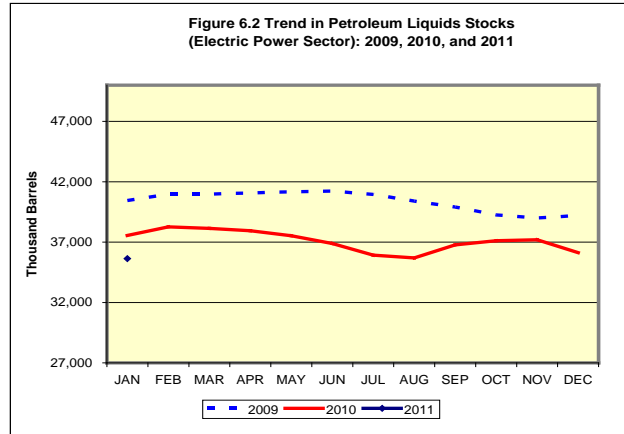
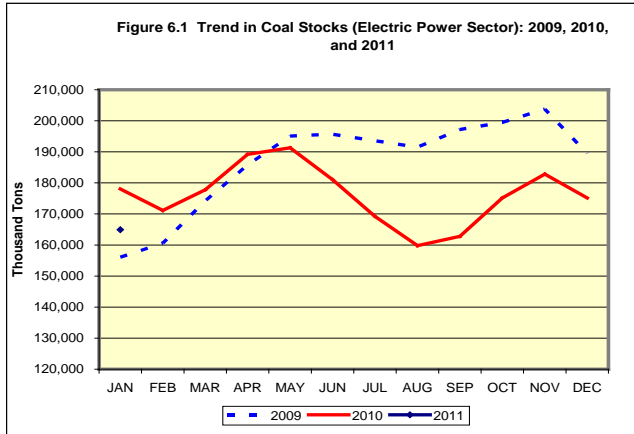


# Section 6. Fossil Fuel Stock Trends

Data for:  
January 2011

**Table 6.1 Trends in Total Fossil Fuel Stocks (Electric Power Sector)**

Fossil Fuel Stocks	Jan-11	Jan-10	% Change	Dec-10	% Change
<b>Coal, Total (Thousand Short Tons)</b>	164,932	178,063	-7.4%	175,160	-5.8%
Bituminous (includes anthracite and coal synfuel)	76,432	86,257	-11.4%	81,185	-5.9%
Subbituminous	81,771	86,968	-6.0%	87,096	-6.1%
Lignite	6,729	4,838	39.1%	6,879	-2.2%
<b>Petroleum Liquids (Thousand Barrels)</b>	35,634	37,556	-5.1%	36,126	-1.4%



# Section 7. Average Number of Days of Burn Non-Lignite Coal

Data for:  
January 2011

**Table 7.1 Average Number of Days of Burn Non-Lignite Coal by Region (Electric Power Sector)**

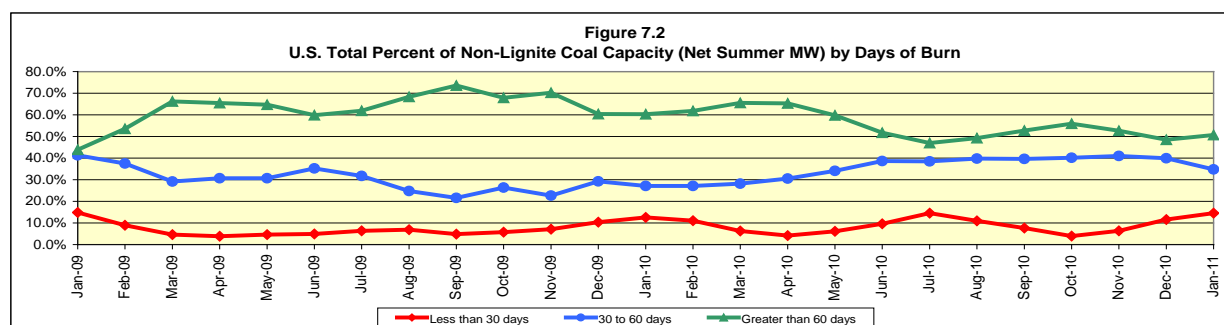
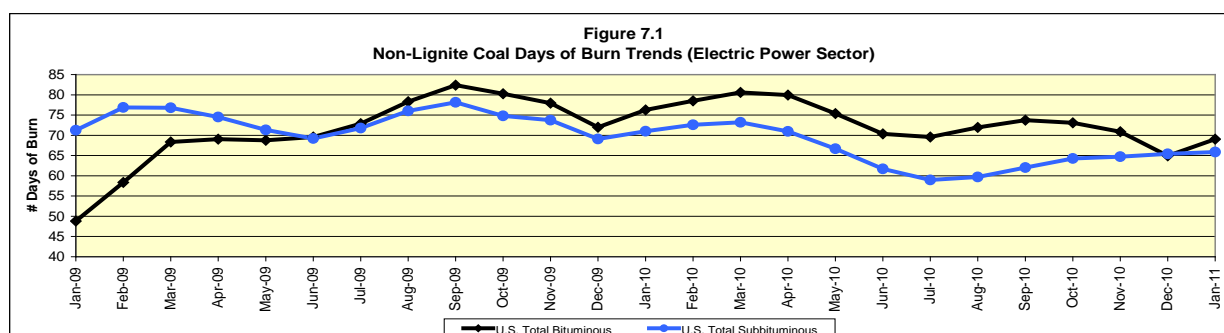
Zone	Jan-11	Jan-10	% Change	Dec-10	% Change
Northeast	39	56	-30.7%	44	-12.2%
South	68	76	-11.0%	65	4.0%
Midwest	66	66	0.5%	66	0.4%
West	80	92	-13.2%	72	10.3%

**Table 7.2 Percent of Non-Lignite Coal Capacity (Net Summer MW) by Days of Burn (Electric Power Sector)**

Zone	January 2011		
	Less than 30 days	30 to 60 days	Greater than 60 days
Northeast	43.3%	34.8%	22.0%
South	17.8%	29.4%	52.8%
Midwest	9.7%	40.1%	50.2%
West	3.8%	34.7%	61.5%
U.S. Total	14.6%	34.8%	50.7%

**Table 7.3 Coal Stocks and Average Number of Days of Burn for Non-Lignite Coal by Region (Electric Power Sector)**

Zone	Coal	Jan-11		Jan-10		% Change of Stocks	Dec-10		% Change of Stocks
		Stocks (000 tons)	Days of Burn	Stocks (000 tons)	Days of Burn		Stocks (000 tons)	Days of Burn	
Northeast	Bituminous	6,123	41	8,474	59	-27.7%	6,980	47	-12.3%
	Subbituminous	481	23	655	34	-26.5%	523	26	-7.9%
South	Bituminous	42,290	72	47,300	78	-10.6%	45,499	68	-7.1%
	Subbituminous	4,617	46	6,761	68	-31.7%	5,074	49	-9.0%
Midwest	Bituminous	17,228	67	18,281	69	-5.8%	17,679	59	-2.5%
	Subbituminous	43,306	66	41,824	64	3.5%	47,025	68	-7.9%
West	Bituminous	6,688	113	7,921	129	-15.6%	6,771	101	-1.2%
	Subbituminous	28,475	74	31,921	85	-10.8%	28,607	67	-0.5%
U.S. Total	Bituminous	72,329	69	81,977	76	-11.8%	76,929	65	-6.0%
	Subbituminous	76,880	66	81,160	71	-5.3%	81,229	65	-5.4%



## Section 8. Month-to-Month Comparisons: Electric Power Retail Sales and Average Prices

Data for:  
January 2011

### Retail Sales

**Table 8.1 Retail Sales (Million kWh)**

Ultimate Customer	Jan-11	Jan-10	% Change	Dec-10	% Change
Residential	147,593	147,895	-0.2%	130,380	13.2%
Commercial	110,907	108,031	2.7%	107,864	2.8%
Industrial	78,619	74,972	4.9%	79,688	-1.3%
Transportation	650	738	-11.8%	672	-3.3%
All Sectors	337,770	331,635	1.8%	318,605	6.0%

### Average Retail Price

**Table 8.2 Average Retail Price (Cents/kWh) -- U.S. Total**

Ultimate Customer	Jan-11	Jan-10	% Change	Dec-10	% Change
Residential	10.97	10.56	3.9%	11.04	-0.6%
Commercial	9.93	9.63	3.1%	9.81	1.2%
Industrial	6.60	6.53	1.1%	6.59	0.2%
Transportation	10.69	10.49	1.9%	10.28	4.0%
All Sectors	9.61	9.34	2.9%	9.51	1.1%

**Table 8.3 Average Retail Price (Cents/kWh) by Census Division**

Census Division	Residential			All Sectors		
	Jan-11	Jan-10	% Change	Jan-11	Jan-10	% Change
New England	16.02	16.55	-3.2%	15.07	15.17	-0.7%
Middle Atlantic	14.82	14.46	2.5%	13.06	12.88	1.4%
East North Central	10.58	10.20	3.7%	8.88	8.69	2.2%
West North Central	8.86	8.04	10.2%	7.60	7.02	8.3%
South Atlantic	10.58	9.92	6.7%	9.58	9.00	6.4%
East South Central	9.53	8.70	9.5%	8.34	7.66	8.9%
West South Central	9.78	10.09	-3.1%	8.17	8.67	-5.8%
Mountain	9.62	9.50	1.3%	7.93	7.93	0.0%
Pacific Contiguous	12.08	12.14	-0.5%	10.72	10.62	0.9%
Pacific Noncontiguous	23.13	21.77	6.2%	21.64	19.94	8.5%
U.S. Total	10.97	10.56	3.9%	9.61	9.34	2.9%



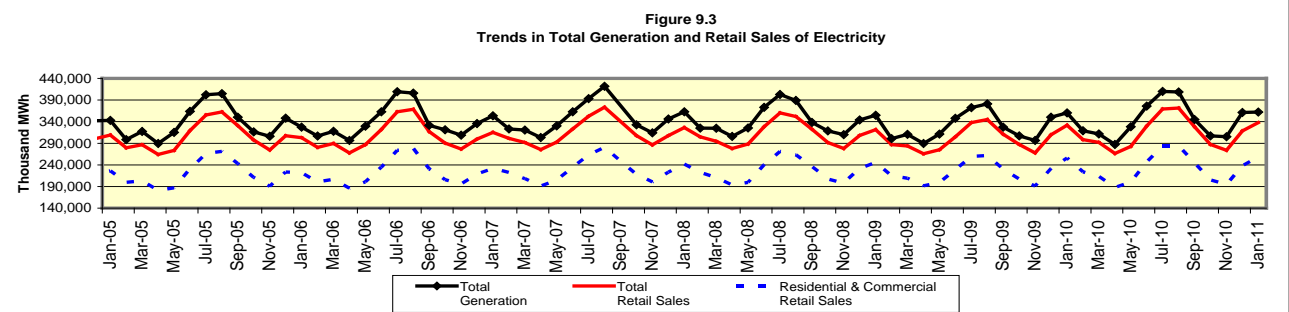
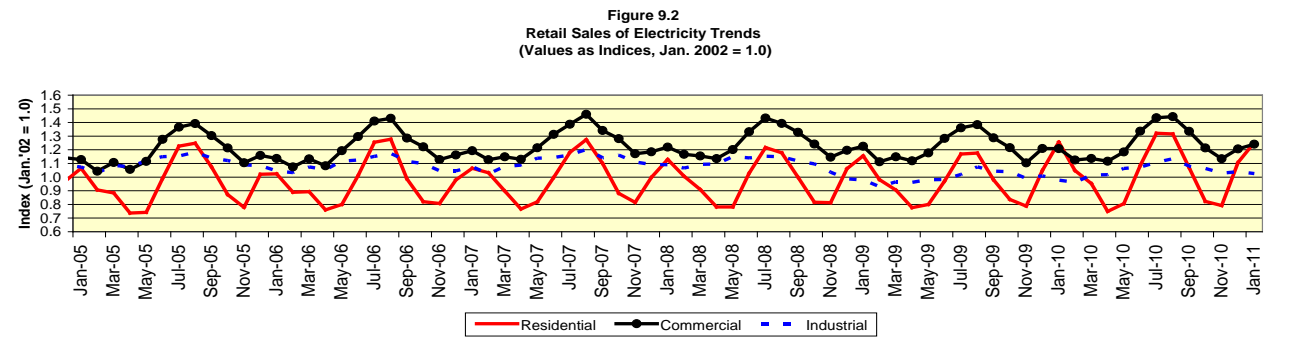
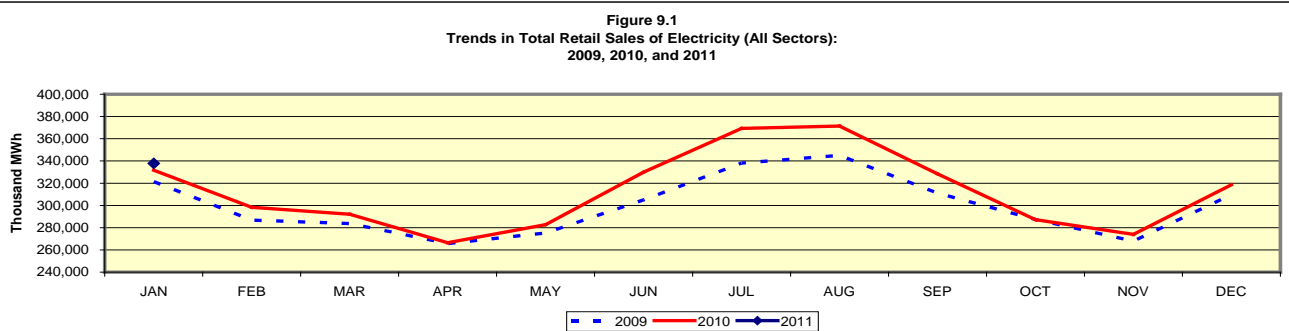
**Table 9.1 Trends in Total Retail Sales of Electricity (All Sectors)**  
Millions of Kilowatthours

**Year-to-Date Comparison**

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	January 2011	January 2011	147,593	110,907	78,619	650	337,770
<b>Prior Period</b>	January 2010	January 2010	147,895	108,031	74,972	738	331,635
<b>Percent Difference</b>			-0.2%	2.7%	4.9%	-11.9%	1.8%

**Comparison to Prior Twelve-Month Period**

	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
<b>Current Period</b>	February 2010	January 2011	1,450,456	1,332,198	965,813	7,652	3,756,119
<b>Prior Period</b>	February 2009	January 2010	1,376,290	1,305,676	917,410	7,744	3,607,120
<b>Percent Difference</b>			5.4%	2.0%	5.3%	-1.2%	4.1%



# Section 10. Average Retail Price Trends

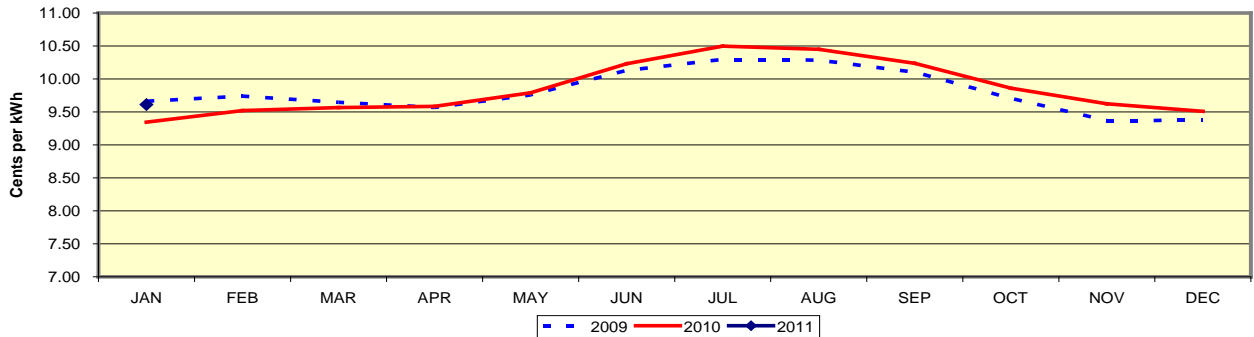
Data for:  
January 2011

**Table 10.1 Trends in Average Retail Price of Electricity (All Sectors)  
Cents per Kilowatthour**

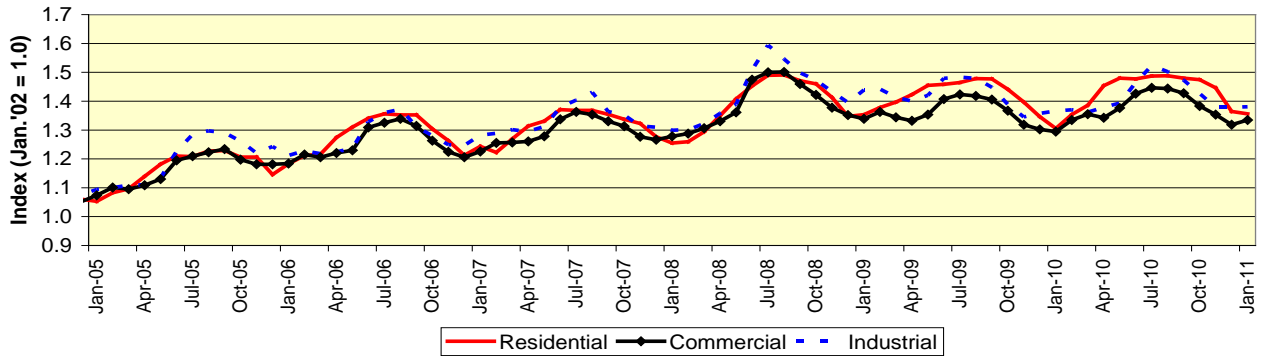
Year-to-Date Comparison							
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	January 2011	January 2011	10.97	9.93	6.60	10.69	9.61
Prior Period	January 2010	January 2010	10.56	9.63	6.53	10.49	9.34
Percent Difference			3.9%	3.1%	1.1%	1.9%	2.9%

Comparison to Prior 12 Month Period							
	Starting Month	Ending Month	Residential	Commercial	Industrial	Transportation	Total (All Sectors)
Current Period	February 2010	January 2011	11.62	10.28	6.79	10.98	9.90
Prior Period	February 2009	January 2010	11.46	10.14	6.78	10.65	9.79
Percent Difference			1.4%	1.4%	0.1%	3.1%	1.1%

**Figure 10.1 Trends in Average Retail Price of Electricity (All Sectors):  
2009, 2010, and 2011**



**Figure 10.2 Average Retail Price of Electricity: Trends by Sector  
(Values as Indices, Jan. 2002 = 1.0)**



# Section 11. Heating and Cooling Degree Days

Data for:  
January 2011

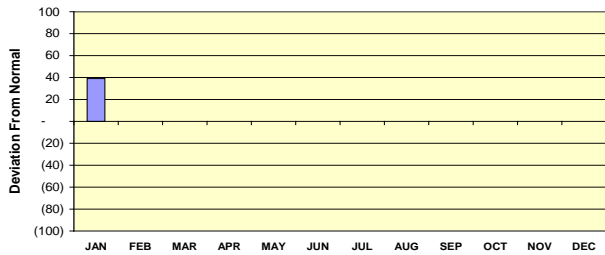
### Table 11.1 Degree Days

		Heating Degree Days				Cooling Degree Days			
	Month	Heating Degree Days	Normal Heating Degree Days	Deviation From Normal	Percent Difference From Normal	Cooling Degree Days	Normal Cooling Degree Days	Deviation From Normal	Percent Difference From Normal
<b>Current Period</b>	January 2011	956	917	39	4.3%	3	9	-6	-66.7%
<b>Prior Period</b>	January 2010	940	917	23	2.5%	3	9	-6	-66.7%
<b>Percent Difference</b>		1.7%				0.0%			

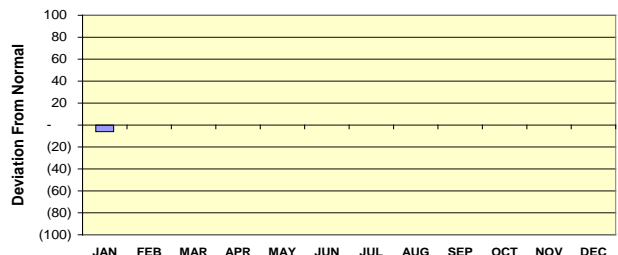
### Table 11.2 Trends in Heating and Cooling Degree Days

Year-to-Date Comparison					Comparison to Prior 12 Month Period				
	Starting Month	Ending Month	Heating Degree Days	Cooling Degree Days		Starting Month	Ending Month	Heating Degree Days	Cooling Degree Days
<b>Current Period</b>	January 2011	January 2011	956	3	<b>Current Period</b>	February 2010	January 2011	4,466	1,458
<b>Prior Period</b>	January 2010	January 2010	940	3	<b>Prior Period</b>	February 2009	January 2010	4,464	1,225
<b>Percent Difference</b>			1.7%	0.0%	<b>Percent Difference</b>			0.0%	19.0%

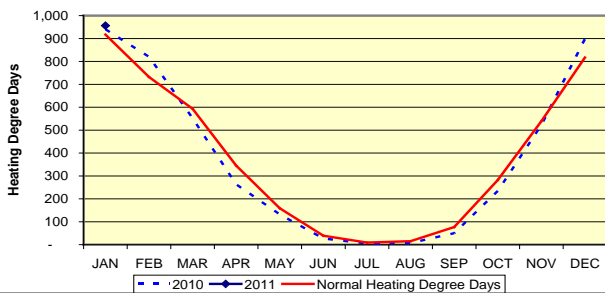
**Figure 11.1 Deviation From Normal: Heating Degree Days, 2011**



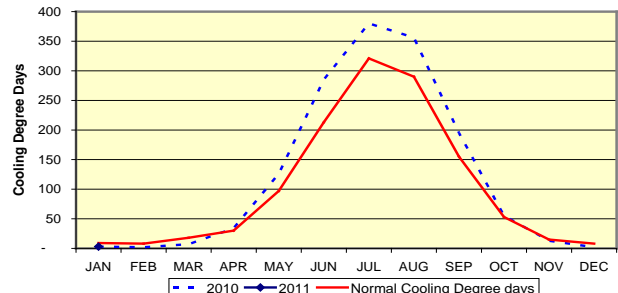
**Figure 11.2 Deviation From Normal: Cooling Degree Days, 2011**



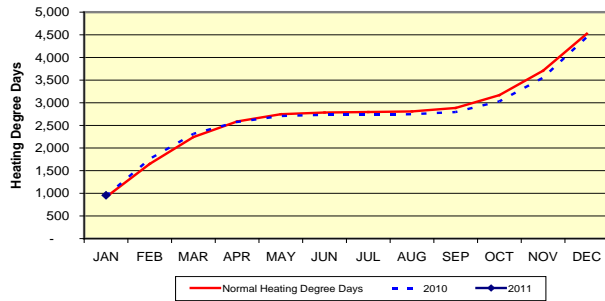
**Figure 11.3 Trend in Heating Degree Days: 2010, 2011, and Normal**



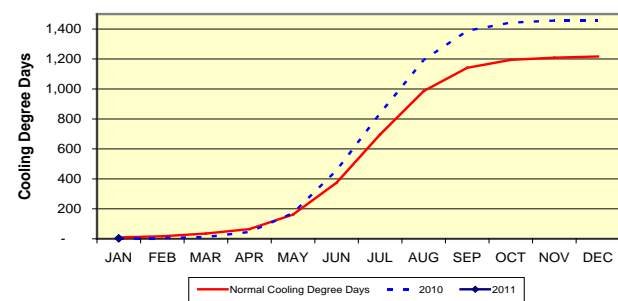
**Figure 11.4 Trend in Cooling Degree Days: 2010, 2011, and Normal**



**Figure 11.5 Trend in Cumulative Heating Degree Days: 2010, 2011, and Normal**



**Figure 11.6 Trend in Cumulative Cooling Degree Days: 2010, 2011, and Normal**



**General:** The Monthly Flash Estimates of Electric Power Data ("Flash Estimates") is prepared by the Electric Power Operations Team, Office of Electricity, Renewables and Uranium Statistics, U.S. Energy Information Administration (EIA), U.S. Department of Energy. Data published in the Flash Estimates are compiled from the following sources: U.S. Energy Information Administration, Form EIA-826, "Monthly Electric Utility Sales and Revenues with State Distributions Report," and U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report."

The survey data are collected monthly using multiple-attribute cutoff sampling of power plants and electric retailers for the purpose of estimation for various data elements (generation, stocks, revenue, etc.), for various categories, such as geographic regions. (The data elements and categories are "attributes.") The nominal sample sizes are: for the Form EIA-826, approximately 450 electric utilities and other energy service providers; for the Form EIA-923, approximately 1590 plants. Regression-based (i.e., "prediction") methodologies are used to estimate totals from the sample. Essentially complete samples are collected for the *Electric Power Monthly* (EPM), which includes State-level values. The Flash Estimates is based on an incomplete sample and includes only national-level estimates. Using 'prediction,' it is generally possible to make estimates based on the incomplete EPM sample, and still estimate variances.

For complete documentation on EIA monthly electric data collection and estimation, see the Technical Notes to the *Electric Power Monthly*, at: <http://www.eia.gov/cneaf/electricity/epm/epm.pdf>. Values displayed in the Flash Estimates may differ from values published in the *Electric Power Monthly* due to the additional data collection and data revisions that may occur between the releases of these two publications. This report represents the EIA's initial release for national level electricity data. Updated information will be released in the *Electric Power Monthly*.

**Sector definitions:** The Electric Power Sector comprises electricity-only and CHP plants within the North American Industrial Classification System 22 category whose primary business is to sell electricity, or electricity and heat, to the public (i.e., electric utility plants and Independent Power Producers (IPP), including IPP plants that operate as combined heat and power producers). The All Sectors totals include the Electric Power Sector and the Commercial and Industrial sectors (Commercial and Industrial power producers are primarily CHP plants).

**Composition of fuel categories:** See notes on page 3.

**Degree Days:** Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. Heating degree-days are the number of degrees that the daily average temperature falls below 65 °F. Cooling degree-days are the number of degrees that the daily average temperature rises above 65 °F. The daily average temperature is the mean of the maximum and minimum temperatures in a 24-hour period. For example, a weather station recording an average daily temperature of 40 °F would report 25 heating degree-days for that day (and 0 cooling degree-days). If a weather station recorded an average daily temperature of 78 °F, cooling degree-days for that station would be 13 (and 0 heating degree days).

**Average Days of Burn:** Average Days of Burn is defined as the average number of days remaining until coal stocks reach zero if no further deliveries of coal are made. These data have been calculated using only the population of coal plants present in the monthly Form EIA-923. This includes 1) coal plants that have generators with a primary fuel of bituminous coal (including anthracite) or subbituminous, and 2) are in the Electric Power Sector (as defined in the above "Sector definitions"). Excluded are plants with primary fuel of lignite and waste coal, mine mouth plants, and out of service plants. Coal storage terminals and the related plants that they serve are aggregated into one entity for the calculation of Average Days of Burn, as are plants that share stockpiles.

Average days of burn is computed as follows: End of month stocks for the current (data) month, divided by the average burn per day. Average burn per day is the average of the three previous years' consumption as reported on the Form EIA-923.

For lists of the plants included in the calculations, the plants that are excluded, and the plants that are aggregated with terminals, contact EIA at [EIA923@eia.gov](mailto:EIA923@eia.gov).

These data are displayed by coal rank and by zone. Each zone has been formed by combining the following Census Divisions:

"Northeast" -- New England, Middle Atlantic  
 "South" -- South Atlantic, East South Central  
 "Midwest" -- West North Central, East North Central  
 "West" -- Mountain, West South Central, Pacific Contiguous

#### **Coal Stocks: Section 6 vs. Section 7**

The coal stocks data presented in Section 6 will differ from the coal stocks presented in Section 7. This occurs because coal stocks in Section 6 include the entire population of coal plants that report on both the annual and monthly Form EIA-923. The coal stocks reported in Section 7 only include coal plants that report on the monthly Form EIA-923 and have a primary fuel of bituminous (including anthracite) or subbituminous as reported on the Form EIA-860.